

OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650

February 14, 1966

Russell Operating Company
101 Petroleum Building
Abilene, Texas

Attn: Mr. James E. Russell

Gentlemen:

Enclosed herewith are the results of permeability and porosity tests run on the Rotary core taken from the Martin-Welda Field, Well No. FW-2, Anderson County, Kansas, and submitted to our laboratory on January 10, 1966.

This core was submitted to the laboratory by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman
Benjamin R. Pearman

BRP:rf

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Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Russell Operating Co. Lease Martin-Welda Field Well No. FW-2

Location 660' NSL & 1155' WEL, SE

Section 4 Twp. 22S Rge. 19E County Anderson State Kansas

Name of Sand - - - - - Squirrel

Top of Core - - - - - 811.0

Bottom of Core - - - - - 844.0

Top of Sand - - - - - 814.0

Bottom of Sand - - - - - 839.0

Total Feet of Permeable Sand - - - - - 22.0

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 1

6.0

6.0

1 - 5

4.0

10.0

5 - 10

5.0

15.0

10 - 20

3.0

18.0

20 & above

4.0

22.0

Average Permeability Millidarcys - - - - - 11.3

Average Percent Porosity - - - - - 13.7

Average Percent Oil Saturation - - - - -

Average Percent Water Saturation - - - - -

Average Oil Content, Bbls./A. Ft. - - - - -

Total Oil Content, Bbls./Acre - - - - -

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - -

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - -

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - -

Total Calculated Oil Recovery, Bbls./Acre - - - - -

Packer Setting, Feet - - - - -

Viscosity, Centipoises @ - - - - -

A. P. I. Gravity, degrees @ 60 °F - - - - -

Elevation, Feet - - - - - 1084.0

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Company Russell Operating Co. Lease Martin-Welda Field Well No. FW-2

Depth Interval, Description

Feet

811.0 - 814.0 - Sandy shale.

814.0 - 839.0 - Alternate layers of sandstone and shale.

839.0 - 844.0 - Shale.

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RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Russell Operating Co. Lease Martin-Welda Field Well No. FW-2

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
1	814.5	0.54	1.0	1.0	0.54	9.0
2	815.5	13.	1.0	2.0	13.00	18.0
3	816.5	0.76	1.0	3.0	0.76	10.6
4	817.5	31.	1.0	4.0	31.00	21.2
5	818.5	0.54	1.0	5.0	0.54	11.2
6	819.5	5.7	1.0	6.0	5.70	13.8
7	820.5	14.	1.0	7.0	14.00	18.8
8	821.5	0.28	1.0	8.0	0.28	10.8
9	822.5	Imp.	1.0	9.0	0.00	8.5
10	823.5	8.0	1.0	10.0	8.00	18.6
11	824.5	10.	1.0	11.0	10.00	14.9
12	825.5	0.28	1.0	12.0	0.28	10.4
13	826.5	6.3	1.0	13.0	6.30	14.9
14	827.5	1.4	1.0	14.0	1.40	11.1
15	828.5	5.9	1.0	15.0	5.90	17.1
16	829.5	Imp.	1.0	16.0	0.00	6.6
17	830.5	1.2	1.0	17.0	1.20	11.9
18	831.5	1.3	1.0	18.0	1.30	12.0
19	832.5	21	1.0	19.0	21.00	19.8
20	833.5	81.	1.0	20.0	81.00	22.0
21	834.5	27.	1.0	21.0	27.00	15.7
22	835.5	0.70	1.0	22.0	0.70	9.7
23	836.5	15.	1.0	23.0	15.00	15.2
24	837.5	Imp.	1.0	24.0	0.00	8.2
25	838.5	3.1	1.0	25.0	3.10	12.2

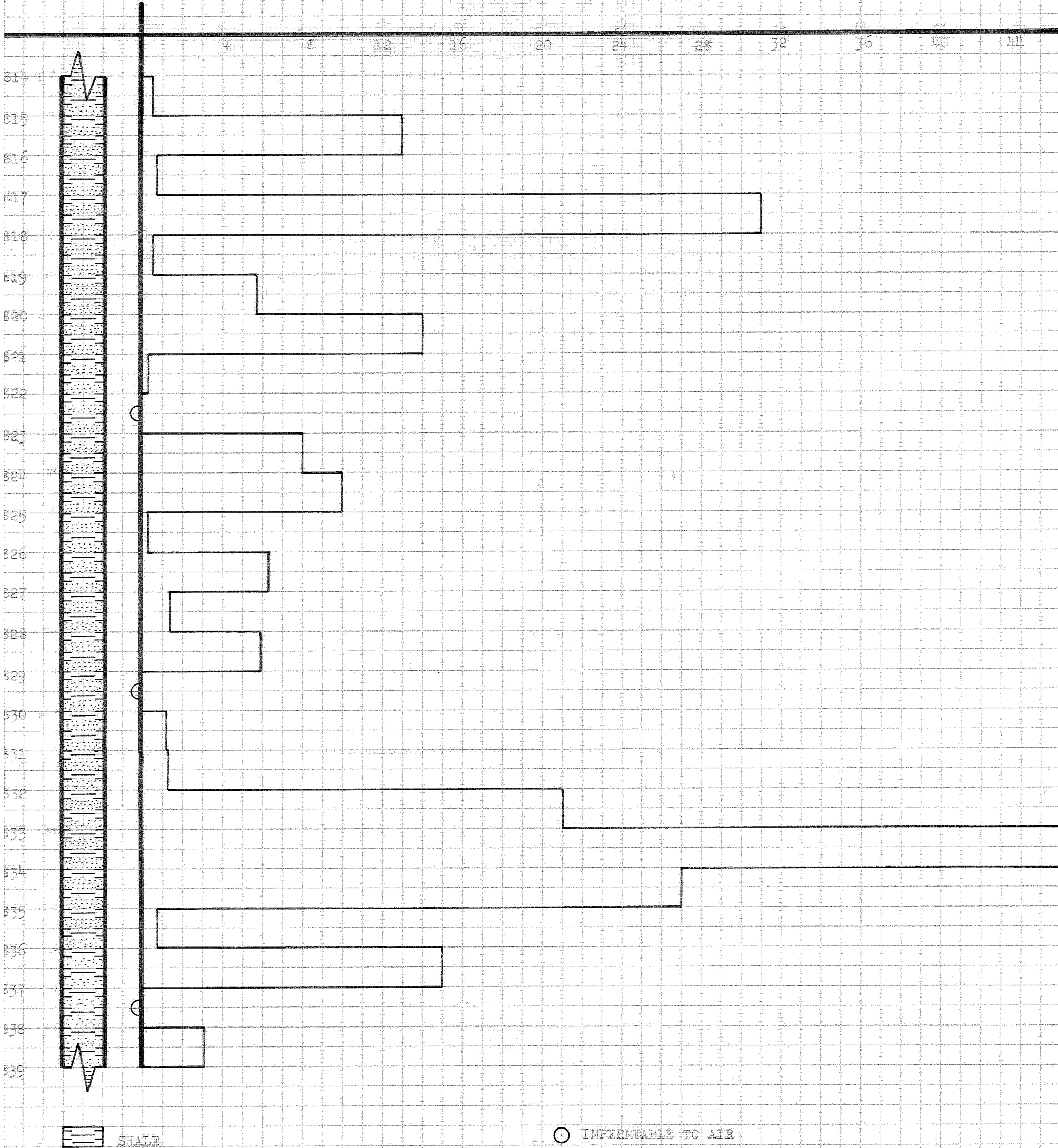
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SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE II A

Company	Russell Operating Company	Lease	Martin-Welda Field	Well No.	FW-2
Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, Millidarcys	Average Effective Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity
814.0 - 826.0	12.0	7.7		84.10	13.8
826.0 - 839.0	13.0	14.9		163.90	13.6
814.0 - 839.0	25.0	11.3		248.00	13.7

AIR PERMEABILITY, IN MILLIDARCYS



OPERATING COMPANY

WELL NO. FW-2

PERSON COUNTY, KANSAS

AIR PERMEABILITY, MILLIDARCYS	PERMEABILITY CAPACITY, FT. x MD.	AVERAGE POROSITY, PERCENT
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7.7	84.10	13.8
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1.9	163.90	13.6
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1.3	248.00	13.7
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OILFIELD RESEARCH LABORATORIES
CHAMUTE, KANSAS
FEBRUARY, 1966

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ALTERNATE LAYERS SANDSTONE & SHALE

MARTIN-WELDA FIELD

ANDERSON COUNTY

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVG. AIR PERMEABILITY, MILLICARCYS	PERM CA FE
814.0 - 826.0	12.0	7.7	
826.0 - 839.0	13.0	14.9	
814.0 - 839.0	25.0	11.3	

STANDARD $\odot$ CROSS SECTION
MILLIMETER

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